

AMENDMENT TO THE CLAIMS

1. (Currently Amended): An optical detecting sensor, comprising:

a sensor thin film transistor (TFT) generating optical current;

a storage capacitor storing charges of the optical current generated in the sensor thin film transistor; and

a switching TFT controlling a release of the stored charges, the switching TFT having a gate electrode, an insulating layer on the gate electrode, an active layer on the insulating layer, an ohmic contact layer on the active layer, and dual layered source and drain electrodes that are each comprised of a transparent conductive material ~~that extends over and contacts the ohmic contact layer,~~ and a metal material, ~~that extends over the transparent conductive material and that wraps around an end of the transparent conductive material to contact the ohmic contact layer~~

wherein both of the transparent conductive material and the metal material of the dual layered source and drain electrodes contact the ohmic contact layer, whereby sensitivity of the optical detecting sensor is improved.

2. (Canceled)

3. (Previously Presented): An optical detecting sensor according to claim 1, wherein the metal material is selected from a group consisting of tungsten, chrome and molybdenum.

4. (Original): An optical detecting sensor according to claim 1, wherein the transparent conducting material is indium tin oxide.

5-8. (Canceled)

9. (Previously Presented): An optical detecting sensor according to claim 1, wherein the metal material is a substantially non-transparent metal material.

10-14. (Canceled)

15. (Previously Presented): A thin film transistor (TFT) sensor, comprising:

a sensor TFT having a gate electrode and spaced apart first and second sensor electrodes;

and

a switching TFT comprised of:

a gate electrode on a transparent substrate;

an insulating layer over the gate electrode;

a semiconductor layer on the insulating layer and adjacent the gate electrode,

wherein the semiconductor layer includes an active layer and an ohmic contact layer;

spaced apart first and second switching electrodes on the semiconductor layer that

define a channel region, wherein the second switching electrode electrically contacts the contact layer; and

a storage capacitor having a first storage electrode and a second storage electrode,

wherein the second storage electrode of the storage capacitor connects to the first sensor electrode and to the second switching electrode;

wherein the second switching electrode is a dual layer structure comprised of a transparent conducting layer that is in contact with said ohmic contact layer and a non-transparent metal layer that extends over the transparent conductive material and that

wraps around an end of the transparent conductive material so as to contact the ohmic contact layer.

16. (Canceled)

17. (Previously Presented): A thin film transistor (TFT) sensor according to claim 15, wherein the transparent conducting layer contacts a side of the active layer.

18-20. (Canceled)

21. (Previously Presented): An optical detecting sensor, comprising:

a sensor thin film transistor (TFT) for generating optical current;

a storage capacitor for storing charges of the generated optical current;

a switching TFT for selectively controlling release of the stored charges, the switching TFT having a gate electrode on a first surface of transparent substrate, an insulating layer on the gate electrode, an active layer on the insulating layer, an ohmic contact layer on the active layer, and dual layered source and drain electrodes that are each comprised of a transparent conductive material that extends over and contacts the ohmic contact layer, and a metal material that extends over the transparent conductive material and that wraps around an end of the transparent conductive material to contact the ohmic contact layer;

wherein the gate electrode blocks light passed by the first surface from reaching the active layer, and wherein the ohmic contact layer rests on the active layer.